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BULLETIN
OF
PURDUE UNIVERSITY

VOL. XXII.

APRIL, 1922

NO. 2

CIRCULAR OF INFORMATION
CONCERNING THE
SCHOOL OF PHARMACY
1922-1923



Prescription Room

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UNIVERSITY CALENDAR

1922

September 9 to 13.....	8 A. M.	Registration of Resident Students.
September 13	11 A. M.	First Semester begins.
November 30		Thanksgiving Day. Holiday.
December 20	12 M.	Christmas Recess begins.

1923

January 3	1 P. M.	Christmas Recess ends.
January 29	8 A. M.	Second Semester Registration begins.
February 3	12 M.	First Semester ends.
February 5	8 A. M.	Second Semester begins.
May 30		Memorial Day.
June 9	12 M.	Second Semester ends.
June 13		Commencement.

* To July 17, 1921.

† From August 4, 1921.

‡ To September 14, 1921.

§ From September 14, 1921.

CORPS OF INSTRUCTORS, 1921-22

CHARLES BERNARD JORDAN, Ph. C., B. S., and M. S. in Pharm., U. of Mich. Head of School of Pharmacy, Professor of Pharmaceutical Chemistry.

WILLIAM FRANCIS GIDLEY, Ph. C., B. S. in Pharm., U. of Mich. Professor of Pharmacy.

CHALMERS JOSEPH ZUFALL, M. S., Purdue. Instructor in Materia Medica.

HENRY MATTHEW BURLAGE, A. M., Harvard. Assistant in Pharmacy.

STANLEY COULTER, Ph. D., LL. D. Acting Chairman of the Faculty and Executive Committee; Dean of the School of Science; Professor of Biology; Director of the Biology Laboratories; Dean of Men.

PERCY NORTON EVANS, Ph. D. Head of the Department of Chemistry; Professor of Chemistry; Director of the Chemical Laboratory.

WILLIAM MARSHALL, Ph. D. Acting Head of the Department of Mathematics; Professor of Mathematics.

THOMAS FRANCIS MORAN, Ph. D., Head of the Department of History and Economics; Professor of History and Economics.

HERMAN BABSON, A. M., Ph. D., Head of the Department of Modern Languages; Professor of Modern Languages.

HERBERT LE SOURD CREEK, Ph. D., Head of the Department of English; Professor of English.

GEORGE LUCAS ROBERTS, A. M., Head of the Department of Education; Professor of Education; Director of Vocational Education.

ERVIN SIDNEY FERRY, B. S., Head of the Department of Physics; Professor of Physics.

RONALD DeVORE JOHNSON, Major, Field Artillery, U. S. A.; Professor of Military Science and Tactics; Commandant of Cadets.

NELSON AUSTIN KELLOGG, B. A., Head of Department of Physical Education; Professor of Physical Education.

LOUIS AGASSIZ TEST, B. M. E., A. C., Ph. D., Professor of General Chemistry.

EDWARD G. MAHIN, M. S., Ph. D., Professor of Analytical Chemistry.

ARTHUR RENWICK MIDDLETON, Ph. D., Professor of Inorganic Chemistry.

OLIVER PERKINS TERRY, M. S., M. D., Professor of Anatomy and Physiology; University Physician.

CHARLES AUGUST BEHRENS, M. S., Ph. D., Professor of Bacteriology.

EDWIN JACOB KOHL, M. S., Instructor in Botany.

The School of Pharmacy also has the advantage of a large staff of instructors and assistants in the various departments of instruction listed above.

PREFATORY STATEMENT

Purdue University School of Pharmacy was established in 1884 in response to a growing demand for a thorough, practical and theoretical training in Pharmacy and related branches.

For nearly forty years this School has served the people of Indiana and has always stood in the front rank of the profession.

More than eight hundred students have graduated from the School and are successfully pursuing the profession of Pharmacy, Medicine, Teaching, Analytical and Pharmaceutical Chemistry. Among its graduates are numbered many of the most prominent pharmacists and pharmaceutical chemists of the State and Nation.

The School has kept pace with the other departments of the University and with pharmaceutical developments in the extension and perfecting of its instruction and facilities and now offers superior opportunities to those who wish to train themselves thoroughly for the important duties of the professional or manufacturing pharmacist, the pharmaceutical chemist, or the retail pharmacist.



Pharmacy Building

The entrance requirements and class instruction in this School are on the same footing as those required in the other departments of the University. This department thus offers the same opportunities for study and attainment as any other in the institution, and its members participate in all the privileges and responsibilities of the entire University.

The requirements of the Pharmacy Laws of Indiana are more than satisfied by the training furnished in this School.

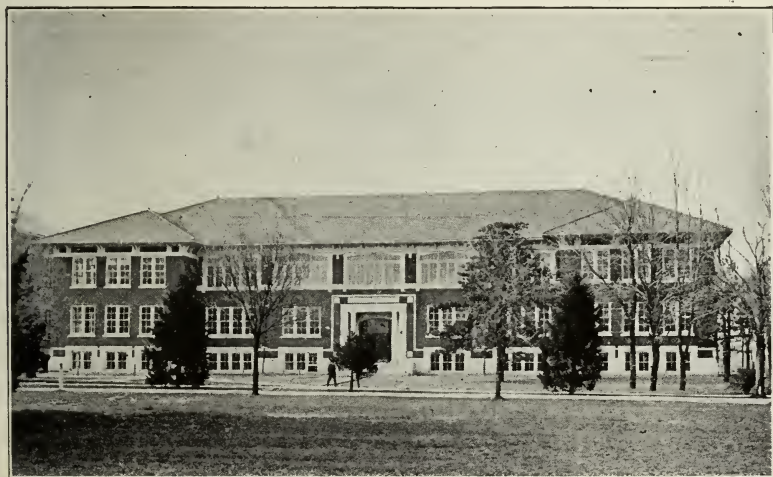
WOMEN IN PHARMACY

This last half century has witnessed the advent of women into all the professions and most of the callings that are open to men, and they have proven conclusively that they are able to take their places in the field of labor with the male members of society.

In foreign countries the women have entered even the most menial callings and are acquitting themselves admirably. Fortunately the American women have splendid opportunities for choosing their calling as the urgency is not so great here as in Europe.

There is no field that offers greater opportunities for women than Pharmacy. The work is clean, pleasant, and agreeable and one that a scientifically trained woman is well fitted to do. Women in Pharmacy have long ago passed the experimental stage, as many of them are successfully conducting their own stores, and many others are ably doing the work of the dispensing laboratory. In fact, they have become so important in this work that they have their own section in the National Association, known as the Woman's Section of the American Pharmaceutical Association.

Never has there been such a demand for skilled pharmacists, and never has the recompense been as great. There was a scarcity of pharmacists before we entered the war, and this has been increased rather than diminished. We have received many calls for lady pharmacists.



Biology Building

What is true in retail pharmacy is also true in analytical laboratories. There is a great demand for analytical chemists, food and drug analysts, bacteriologists, and public health workers. Women are competent to do all of this work if they have received the necessary scientific training. We have graduated many ladies who have acquitted themselves excellently in their profession. Ladies constitute over ten per cent of our present student body. The Purdue School of Pharmacy offers splendid opportunities for ladies to secure a scientific training, and will gladly welcome any who wish to avail themselves of the unusual opportunities that pharmacy offers them.

ADMISSION TO THE UNIVERSITY

Scholastic preparation, as secured by the completion of a systematic plan of study four years in length such as is furnished by the Commissioned High Schools of Indiana, or other schools of equivalent grade, is essential to a student who wishes to enter upon a college course of study. Experience shows that one of the chief causes of failure in college classes is lack of preparation; and many applicants who have had good school opportunities are found to be deficient in their knowledge of preparatory mathematics, and particularly in their ability to use the English language. A thorough working knowledge, therefore, of the preparatory subjects is absolutely necessary in order to begin and carry on the prescribed work of the University, and it is manifestly unfair to the applicant himself to admit him into the University study if the record of his High School work does not demonstrate that his preparation is sufficient to accomplish his University work successfully. The University classes begin where the preparatory work of the High School ends and there is no opportunity after entering the University to make up those deficiencies which the student may have incurred in his preparation. *On this account, applicants who do not satisfy all the stated entrance requirements will not be received into the University.*

Requirements for Admission to the Freshman Class in Agriculture, Science, Pharmacy or Engineering

All applicants must be at least sixteen years of age and must furnish certificates of good character.

The requirements for admission to the Freshman class in all the departments of the University are as follows:

1. The applicant must have completed fifteen units of High School work, a unit representing five recitations a week for a school year of not less than eight months.

2. (a) The applicant will in all cases be required to submit seven units in the following prescribed subjects:

English	3 units
History	1 unit
Algebra	1 unit
Plane Geometry	1 unit
Science (one year of Chemistry, Physics, Botany, Zoology or Physiography with laboratory, or one- half year of Botany combined with one-half year of Zoology)	1 unit

In addition to the above for admission to any of the Engineering Schools of the University—

Algebra	$\frac{1}{2}$ unit
Solid Geometry	$\frac{1}{2}$ unit

(b) The remaining units necessary to make up the required fifteen units may be offered from the following subjects:

English, Foreign Languages,* Mathematics, Science, History, Economics and Sociology.

(c) Or, the applicant may offer preparation in vocational subjects, viz: Agriculture, Home Economics, Industrial Arts and Commercial Subjects, as follows:

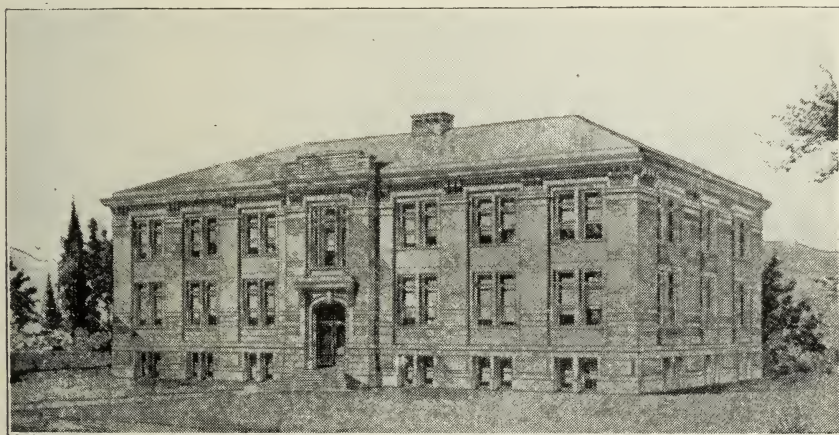
From Approved Vocational Schools or Departments $\frac{1}{2}$ to 5 units
 From Commissioned High Schools..... $\frac{1}{2}$ to 3 units

3. Those who are unable to meet the above requirements will not be admitted to the University.

Application for Admission

All persons who desire to enter any department of the University should make application to the Registrar as early as possible before the opening of the first semester, (September 13, 1922). Those who desire to be admitted by certificate should make application as soon as possible after their graduation from High School.

Early attention to this matter will save the student much delay and embarrassment at the opening of the semester.



Chemistry Building

Admission by Certificate

Graduates of Commissioned High Schools and Approved Vocational Schools or Vocational Departments of Indiana, and the Schools of like standing in other states, will be admitted at the opening of the first semester without examination on the basis of credentials certifying to their age, character, scholarship, and graduation, provided that these credentials cover the requirements for admission, as stated above. This certificate must give in detail, concerning each subject which the applicant has studied in school, the length of time in weeks, the number of hours per week, and the grade or mark indicat-

* Credits are accepted in a Foreign Language only when the applicant presents not less than two full units in that language.

ing his proficiency. The blank form for this certificate will be supplied to the school authorities by the Registrar. The school diploma is not acceptable in place of the certificate.

A Commisisoned High School or an Approved Vocational School or Vocational Department is one which under the rules of the Indiana State Board of Education attains certain prescribed standards of equipment, teaching force, and efficiency and administers in a satisfactory manner a four-year plan of study in advance of eighth-grade or Grammar School studies, and requires for graduation the completion of sixteen units of work.

Admission by Examination

Applicants who are not graduates of standard High Schools, as above described, will be required to take entrance examinations equivalent to the High School course. Such examinations are administered by the College Entrance Examination Board in the principal cities of the United States and Canada on June 19-24, 1922. Applications for the examination must be made on or before Monday, May 22, 1922, and addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y. The examination fee of \$9.00 should be remitted by Postal Order, Express Order, or draft on New York, payable to the order of the College Entrance Examination Board.

Further information as to this examination may be had on application to the Registrar of Purdue University or to the Secretary of the Examination Board, as above.

Admission to Advanced Standing

The following requirements are established for admission to advanced standing:

1. The submission of a letter of honorable dismissal from the institution last attended.
2. A certificate of preparatory work covering the entrance requirements listed on pages 6 and 7.
3. An official transcript of the record of all the work done in institutions previously attended. Personal consultation with the applicant will be required where the credentials are not sufficiently definite.
4. A marked catalog showing the courses referred to in the transcript.
5. For credit in Practical Mechanics, a letter from the previous instructor relating to work performed in Shop Work and Drawing should be submitted.

Credits of courses in Purdue University will be given on account of work of equivalent character and amount successfully done in other colleges. On the basis of these credits advanced standing will be

determined. Advanced credit will be regarded as provisional, and may be withdrawn if dependent work is not satisfactorily done.

Credits for work in secondary schools will be given only on the basis of an examination for advanced standing. Such credit will not count toward graduation if the underlying work has been used to meet the entrance requirements of the University.

Admission of Special Students

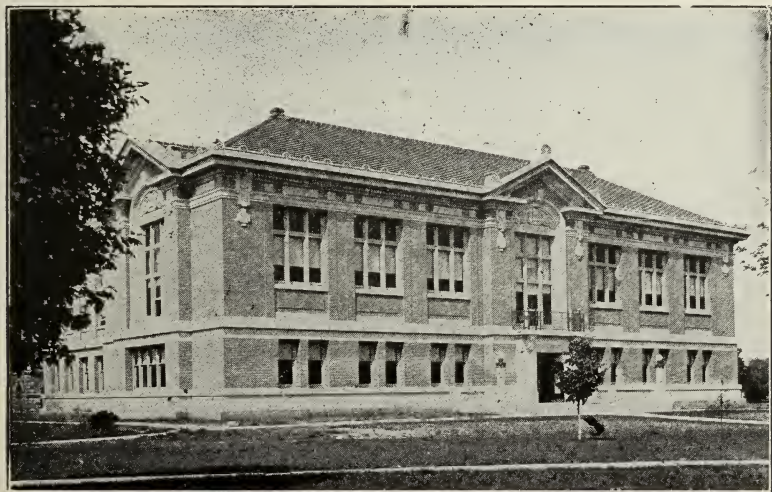
Only in exceptional cases will students be admitted to specially arranged courses of study, and then only when the age, experience, and purposes of the applicant are obviously different from those of the ordinary student. Application for admission as a special student should be made upon a prescribed blank form after consultation with the proper Dean, should be addressed to the Chairman of the Committee on Special Students, and should state, (1) the applicant's age; (2) his school preparation; (3) his practical experience; (4) a plan of study enumerating the subjects he desires to take; (5) the purpose or end expected to be accomplished by his study. Such application will be submitted to a committee of the Faculty for investigation.

Time of Entrance

Save in exceptional cases, students enter the University at the beginning of the first semester. It is impracticable to enter later in the year unless the applicant has completed in another college the work done by the classes previous to the date of his admission.

In 1922, the registration days will be Saturday, Monday, Tuesday and Wednesday—September 9th, 11th, 12th, and 13th. An extra fee of \$2.00 will be collected of students who register after the registration days of either semester.

Resident graduate students must register before October 1.



Library

EXPENSES

Purdue University is a State Institution, therefore the Trustees grant free tuition to all students entering from the State of Indiana. All others are required to pay an annual tuition fee of thirty-five dollars.

Following is a classified statement of all necessary expenditures of students so far as the requirements of the University are concerned:

1. Fixed University Fees.

First Semester fees are payable on registration in September. Second Semester fees are payable the last week in January. Students entering at the beginning of the Second Semester pay fees as listed below for the First Semester.

	First Semester	Second Semester
Entrance fee, \$5.00, payable annually on matriculation-----	\$ 5.00	
Tuition fee for students from without the state, \$35.00 per annum-----	18.00	\$17.00
Incidental fee, \$10.00 per annum-----	5.00	5.00
Laboratory and library fees, \$35.00 per annum-----	18.00	17.00
Medical and infirmary fee, \$1.00 per annum-----	1.00	

Diploma fee, \$5.00, payable on the Saturday preceding graduation.

Payment must be made in cash or by bank draft, express order or postoffice order. No personal checks will be accepted. By direction of the Board of Trustees, no fees are returnable after registration.

2. University Deposits.

To cover breakage of apparatus used in laboratory courses, students are required to deposit in advance certain sums as indicated below. Any portion of this deposit not consumed is refunded at the end of the year.

Laboratory courses in **chemistry**, per annum ----- \$ 5.00
When more than one such course is taken, \$5.00 per semester.

Laboratory courses in **pharmacy**, per annum ----- 10.00

It is expected that the War Department of the U. S. Government will supply uniforms without cost, for use in military drill. In such case, male students entering the freshman or sophomore classes without credit for military instruction will be required to make a deposit to cover damage to uniform and equipment.

3. Personal Expenses (Estimated).

Table board, per week, average-----	\$ 6.50
Room rent, heat and light, 2 in a room, each, per month, average-----	10.00
Washing, per week-----	.75
Books, instruments and supplies, per annum-----	\$20.00 to 40.00

Second-hand books are often obtainable at reduced prices.

County Appointments.—The law of Indiana provides for the appointment of not to exceed two (2) students from each county in the state, who upon entering Purdue University, shall be exempt from the payment of certain entrance and incidental fees, amounting to \$15.00 per annum, but not from library and laboratory fees. Students seeking such appointments will carefully note the following:

1. These appointments are made annually by the Commissioners of the various counties, to whom application therefor should be made. The appointee must reside in the county from which the appointment is made. The appointment expires June 30th, but may be renewed.

2. The certificate of appointment should be filed with the University as soon as made, as the appointment cannot be recognized until this is done. It becomes effective at the beginning of the semester next after it is filed.

3. This appointment does not apply to, nor relieve the applicant from, the requirements as to scholarship demanded for entrance to the University classes.

Prospective students who cannot secure such appointments because the quota from the county is already filled, should not defer entering the University on that account, since the saving of money is not sufficient to offset the loss of time caused by waiting one or more years.

PLANS OF STUDY

The School of Pharmacy offers two Plans of Study presenting superior opportunities to those who wish to train themselves thoroughly for the important duties of the professional or manufacturing pharmacist, the pharmaceutical chemist, or the retail pharmacist.

Two-Year Plan of Study

This plan of study leads to the Degree of Graduate in Pharmacy and is intended to fit students for the practice of Pharmacy, including the preparation of medicine, the compounding of prescriptions, and the chemical and microscopical examination of medicinal materials. The plan of study includes the professional courses set forth in the National Pharmaceutical Syllabus, and in addition, a thorough grounding in the sciences of biology and chemistry, upon which pharmacy is so largely based. The number of hours of instruction given far exceeds the number required in the Syllabus.

FIRST YEAR

First Semester

Courses	Hrs. per wk.	
Pharm. Botany 3.....	2 Lect. 2 Lab.	p. 18
Physiology 46	3 Lect.	p. 18
Gen. Chem. 1a	3 Lect. 3 Lab.	p. 19
English 1 or 1b	3 Lect.	p. 21
Materia Medica 1	2 Lect. 1 Lab.	p. 14
Gen. Pharmacy 11	2 Lect. 4 Lab.	p. 13
Pharm. Arithmetic 27.....	2 Lect.	p. 14

Second Semester

Courses	Hrs. per wk.	
Pharm. Botany 4	2 Lect. 2 Lab.	p. 18
Gen. Chem. 2a.....	3 Lect. 3 Lab.	p. 19
English 2	3 Lect.	p. 21
Materia Medica 2	2 Lect.	p. 15
Gen. Pharmacy 12	2 Lect. 4 Lab.	p. 13
Qual. Anal. 8	2 Lect. 6 Lab.	p. 16
Pharm. Latin 28	1 Lect.	p. 14

SECOND YEAR

First Semester

Courses	Hrs. per wk.	
Bacteriology 66	2 Lect.	p. 19
Posology and Therap. 3	2 Lect.	p. 15
Quant. Anal. 9	2 Lect. 6 Lab.	p. 16
Org. Anal. 11	1 Lect. 3 Lab.	p. 17
Organic Chem. 15	4 Lect.	p. 17
Pres. Practice 17	1 Lect. 3 Lab.	p. 13
Com. Pharmacy 25	3 Lect.	p. 13

Second Semester

Courses	Hrs. per wk.	
Bacteriology 67	2 Lect.	p. 19
Pharmacol. and Tox. 16	2 Lect.	p. 16
Preps. and Drug Assay 20	2 Lect. 6 Lab.	p. 13
Materia Medica 4	4 Lect.	p. 15
Microscopy 10	1 Lect. 3 Lab.	p. 15
Pres. Practice 18	1 Lect. 3 Lab.	p. 13
U. S. P. and N. F. 26.....	2 Lect.	p. 14
Pharm. Jurisprudence 19.....	1 Lect.	p. 13

Four-Year Plan of Study

This plan of Study leads to the degree of Bachelor of Science in Pharmacy, and is intended to fit students for responsible laboratory positions with the State or Government, for the laboratory work of city chemists and bacteriologists, or for the duties of pharmaceutical chemists for manufacturing establishments, wholesale houses and importers. Recent pure food and drug legislation has created many such positions.

The demand made upon this School for laboratory workers far exceeds the supply. Men whose education has been broad and general supplemented with professional training are much in demand. The Four Year Plan of Study offers excellent opportunities to secure this training.

Electives are offered to prepare students for teaching positions.

FRESHMAN YEAR

First Semester

Courses	Hrs.	per wk.	
Pharm. Botany 3	2	Lect. 2 Lab.	p. 18
Gen. Chem. 1a	3	Lect. 3 Lab.	p. 19
English 1 or 1b	3	Lect.	p. 21
Materia Medica 1	2	Lect. 1 Lab.	p. 14
Mathematics 11	3	Lect.	p. 23
Gen. Pharmacy 11	2	Lect. 4 Lab.	p. 13
Pharm. Arithmetic 27	2	Lect.	p. 14
Military Training 1	5	Hrs.	p. 26

Second Semester

Courses	Hrs.	per wk.	
Pharm. Botany 4	2	Lect. 2 Lab.	p. 18
Gen. Chem. 2a	3	Lect. 3 Lab.	p. 19
English 2	3	Lect.	p. 21
Materia Medica 2	2	Lect.	p. 15
Mathematics 12	3	Lect.	p. 23
Gen. Pharmacy 12	2	Lect. 4 Lab.	p. 13
Pharm. Latin 28	1	Lect.	p. 14
Military Training 2	5	Hrs.	p. 26

SOPHOMORE YEAR

First Semester

Courses	Hrs.	per wk.	
Physics 1	4	Lect.	p. 24
Qual. Anal. 3	2	Lect. 6 Lab.	p. 20
English 10	3	Lect.	p. 22
*Mod. Lang. 21 or 51	3	Lect.	pp. 22-23
Org. Chem. 15	4	Lect.	p. 17
Military Training 3	5	Hrs.	p. 26

Second Semester

Courses	Hrs.	per wk.	
Physics 2	4	Lect.	p. 25
Qual. Anal. 4	2	Lect. 6 Lab.	p. 20
English 7a	3	Lect.	p. 22
*Mod. Lang. 22 or 52	3	Lect.	pp. 22-23
Adv. Org. Chem. 15a	2	Lect. 6 Lab.	p. 17
Military Training 4	5	Hrs.	p. 26

JUNIOR YEAR

First Semester

Courses	Hrs.	per wk.	
Bacteriology 18	3	Lect.	p. 18
Quant. Anal. 5	2	Lect. 6 Lab.	p. 20
Mod. Lang. 23 or 55	3	Lect.	pp. 22-23
History 8	3	Lect.	p. 23
Incompat. and Org.			
Anal. 11	1	Lect. 3 Lab.	p. 17

Second Semester

Courses	Hrs.	per wk.	
Bacteriology 19	3	Lect.	p. 18
Quant. Anal. 6	2	Lect. 6 Lab.	p. 20
Mod. Lang. 24 or 56	3	Lect.	pp. 22-23
Microscopy 10	1	Lect. 3 Lab.	p. 15
Chem. Preps. and Drug			
Assay 20	2	Lect. 6 Lab.	p. 13

ELECTIVES

Electives for the year must total at least eight semester hours.

Courses	Hrs.	per wk.	
Adv. Bacteriology 61	2	Lect. 4 Lab.	p. 19
Education 1	3	Lect.	p. 24
Mod. Lang. 21 or 51	3	Lect.	pp. 22-23
Adv. Mathematics 13	3	Lect.	p. 23
Physics 1	4	Lect.	p. 24
Physiological Chem. 17	1	Lect. 3 Lab.	p. 17
Animal Physiology 36	2	Lect. 4 Lab.	p. 18

Courses	Hrs.	per wk.	
Adv. Bacteriology 62	2	Lect. 4 Lab.	p. 19
Education 2	3	Lect.	p. 24
Mod. Lang. 22 or 52	3	Lect.	pp. 22-23
Adv. Mathematics 14	3	Lect.	p. 23
Physics 2	4	Lect.	p. 25
Physiological Chem. 18	1	Lect. 3 Lab.	p. 17

SENIOR YEAR

First Semester

Courses	Hrs.	per wk.	
Economics 11	3	Lect.	p.
Posology and Therap. 3	2	Lect.	p. 15
Food and Drug Anal. 13	1	Lect. 6 Lab.	p. 17
Pres. Practice 17	1	Lect. 3 Lab.	p. 13
Com. Pharmacy 25	3	Lect.	p. 13

Second Semester

Courses	Hrs.	per wk.	
Materia Medica 4	4	Lect.	p. 15
Pharmacology and Tox. 16	2	Lect.	p. 16
Food and Drug Anal. 14	1	Lect. 6 Lab.	p. 17
Pres. Practice 18	1	Lect. 3 Lab.	p. 13
U. S. P. and N. F. 26	2	Lect.	p. 14
Pharm. Jurisprudence 19	1	Lect.	p. 13

ELECTIVES

Electives for the year must total at least eight semester hours.

Courses	Hrs.	per wk.	
Adv. Bacteriology 61	2	Lect. 4 Lab.	p. 19
Physical Chem. 17	3	Lect.	p. 21
Adv. Quant. Anal. 11	2	Lect. 6 Lab.	p. 21
Education 1 or 3	3	Lect.	p. 24
Mod. Lang.	3	Lect.	pp. 22-23
Physiol. Chem. 17	1	Lect. 3 Lab.	p. 17
Adv. Pharm. Chem. 16	2	Lect. 6 Lab.	p. 17
Microscopic Tech and			
Hist. 36	2	Lect. 4 Lab.	p. 18

Courses	Hrs.	per wk.	
Adv. Bacteriology 62	2	Lect. 4 Lab.	p. 19
Physical Chem. 18	3	Lect.	p. 21
Adv. Quant. Anal. 12	2	Lect. 6 Lab.	p. 21
Education 2 or 4	3	Lect.	p. 24
Mod. Lang.	3	Lect.	pp. 22-23
Physiol. Chem. 18	1	Lect. 3 Lab.	p. 17
Adv. Pharm. Chem. 16	2	Lect. 6 Lab.	p. 17
Adv. Microscopy 14	1	Lect. 3 Lab.	p. 16

*The language selected must be pursued for two years.

PHARMACY

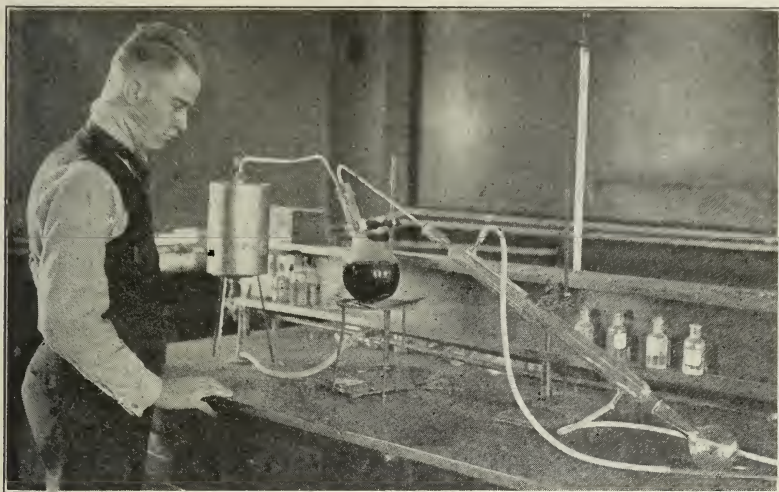
Professor Jordan in charge.

Professors Jordan and Gidley, Assistant Burlage.

11-12. General Pharmacy.—Sem. 1 and 2. 2 + 4

Precedes Pharmacy 17-18.

This course consists of lectures and recitations on the theory and practice of pharmacy. The laboratory work is designed to acquaint the student with fundamental manipulations; then advances from the manufacture of the simpler to the more complex preparations. Each student makes at least one hundred and fifty U. S. Pharmacopoeia and National Formulary preparations conforming to the standards of the U. S. P. and N. F. Professor Gidley; Mr. Burlage.



Steam Distillation of Peppermint

17-18.—Pharmacy and Prescription Practice.—Sem. 1 and 2. 1 + 3

Must be preceded by Pharmacy 11 and 12, and Pharmaceutical Chemistry 8 or its equivalent, and preceded or accompanied by Pharmaceutical Chemistry 11 and 15.

Precedes or accompanies Pharmacy 26.

(a) This course is a presentation of the fundamental principles regarding the filling of prescriptions, with emphasis upon incompatibilities. Our files contain a wide variety of prescriptions taken from stores throughout the State of Indiana. These are used for study and prescription practice.

(b) Prescriptions written by the University Physician for the students are filled in the dispensing laboratory under the direction of a registered pharmacist. This service gives our students actual practice in compounding prescriptions. Due attention is given to the statutes of Indiana governing the filling and labeling of prescriptions.

(c) The course also gives consideration to the preparation of toilet articles, disinfectants and other extemporaneous products. In all this work the acquisition of manipulative skill and laboratory technique is an important feature. Professor Gidley.

19. Pharmaceutical Jurisprudence.—Sem. 2. 1 + 0

The lectures deal in a practical way with pharmacy legislation, and with the special legal responsibilities of the pharmacist. Professor Jordan.

20. Manufacturing Pharmacy and Pharmacopoeial Testing.—Sem. 2 2 + 6

The more complex pharmaceutical preparations will be manufactured and then subjected to pharmacopoeial assay and tests. The student will be trained in careful manipulation in manufacturing, with the understanding that his products must meet pharmacopoeial requirements. In addition there will be considerable drill in U. S. P. assaying. Pills, ointments, powders, fluid extracts, extracts, tinctures, spirits, etc., will be assayed.

The lectures will deal with the fundamental principles underlying manufacturing and pharmacopoeial testing and assaying. Professor Jordan; Mr. Burlage.

25. Commercial Pharmacy.—Sem. 1. 3 + 0

This course is designed to present the professional and commercial aspects of Pharmacy in their relations to the problems of the modern pharmacist. The following are a few of the general subjects considered: Planning and arranging a Pharmacy; Advertising; Salesmanship; Insurance; Side Lines; Compounding of Prescriptions; Clerks; Managers; State Boards of Pharmacy and their Requirements. Professional and Business Ethics. Professor Gidley.

26. U. S. Pharmacopoeia and National Formulary.—Sem. 2.**2 + 0**

Must be preceded or accompanied by Pharmacy 17 and 18.

A critical review of the U. S. Pharmacopoeia and National Formulary and a study of recent scientific contributions to pharmaceutical literature.

Professor Gidley.

**Apparatus for Infusions and Decoctions****27. Pharmaceutical Arithmetic.—Sem. 1.****2 + 0**

This is a systematic course of instruction, dealing with the mathematical calculations incident to practical pharmacy and dispensing.

Professor Jordan.

28. Pharmaceutical Latin.—Sem. 2.**1 + 0**

The course is a study in Latin as applied to Pharmaceutical nomenclature and the Latinization of pharmaceutical and chemical terms. The course also includes the study and interpretation of Latin and Latin abbreviations used in physicians' prescriptions.

Professor Gidley.

MATERIA MEDICA

Professor Jordan in charge.

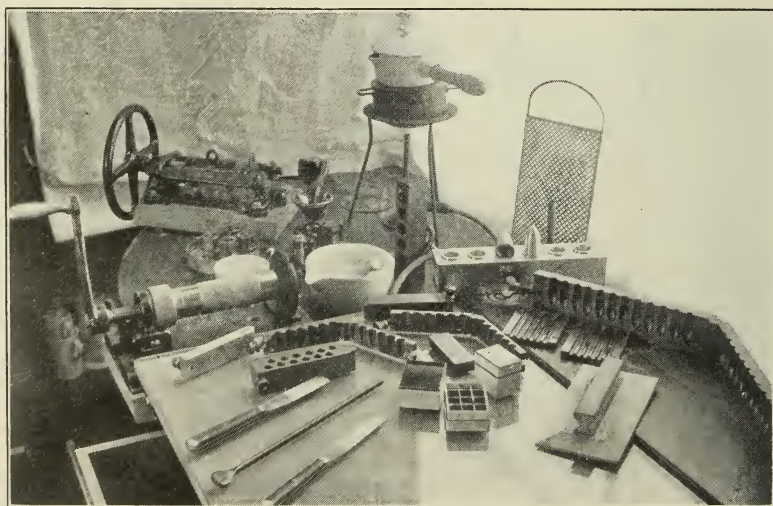
Instructor Zufall

1. Vegetable Materia Medica.—Sem. 1.**2 + 1**

Precedes Materia Medica 3, 4 and 12.

This study treats of the Latin and common names of medicinal drugs, their habitats, general characteristics, active constituents, and adaptability for medicinal use. Special attention is given to the identification of crude drugs by their physical characteristics.

Mr. Zufall.

**Apparatus for Making Suppositories**

2. Biological and Chemical Materia Medica.—Sem. 2.**2 + 0**

Precedes Materia Medica 3, 4, and 12.

Lectures and recitations on medicinal products from the animal world and on inorganic medicinal drugs, including their Latin names, synonyms, sources, physical and chemical characteristics, formulae, preparation, standards and identification by physical properties.

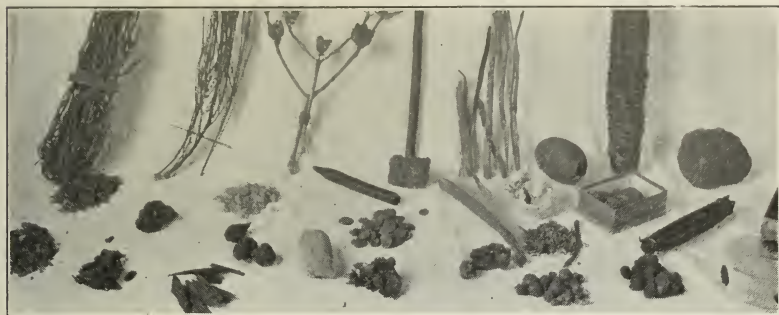
Mr. Zufall.

3. Posology and Therapeutics.—Sem. 1.**2 + 0**

Must be preceded by Materia Medica 1 and 2.

This course deals with problems of dosage and action of drugs.

Mr. Zufall.

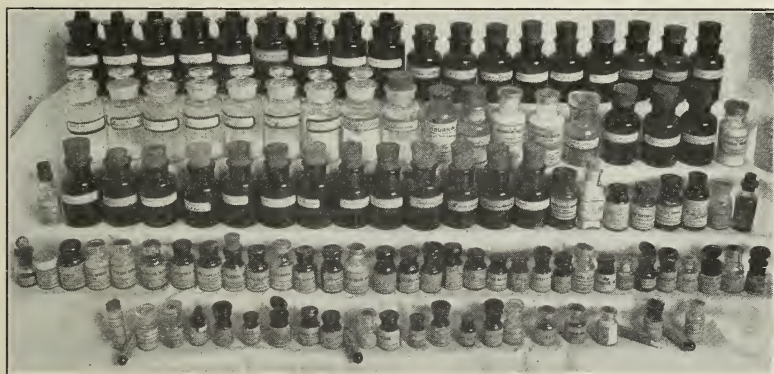
**Crude Drugs****4. Economic and Modern Materia Medica.—Sem. 2.****4 + 0**

Must be preceded by Materia Medica 1 and 2.

(a) A study of methods of selecting, valuing, packing and preserving drugs, and of various economic classifications of drugs.

(b) Official and non-official organic synthetic remedies and preparations, particularly those recognized by the American Medical Association.

Mr. Zufall.

**Showing Some Active Constituents of Crude Drugs****10. Microscopy of Drugs and Spices.—Sem. 2.****1 + 3**

Preceded by Biology 1-2 or 3 and 4.

The lectures deal with the histological features of drugs and spices and their common adulterants.

In the laboratory drugs and spices are studied microscopically and by the aid of microchemical tests, with particular attention to their diagnostic features. A number of unknown mixtures are presented for the identification of the drugs and spices and their adulterants.

Mr. Zufall.

14. Advanced Microscopy.—Sem. 2. 1 + 3

Must be preceded by Materia Medica 10.

Lectures and recitations on the microscopy of vegetable foods and technical products, micro-chemical reactions of inorganic chemicals, quantitative microscopic methods and micrometry.

Laboratory work on the above and on microscopic refractive index and polarization, photomicroscopy, embedding and general microtome sectional methods, permanent mounting, working with turn tables, mechanical stages, camera lucida, illumination, counting cells, binocular microscopes, etc. Mr. Zufall.

16. Pharmacology and Toxicology.—Sem. 2. 2 + 0

Must be preceded by Materia Medica 1, 2, and 3.

Lectures and recitations on the therapeutic use of vegetable, mineral, organic, and biological drugs and preparations. Also a detailed study of poisons and their antidotes, and of first-aid methods in general. Mr. Zufall.

PHARMACEUTICAL CHEMISTRY

Professor Jordan in charge.

Professors Jordan and Gidley; Instructor Zufall; Assistant Burlage.

8. Qualitative Analysis.—Sem. 2. 2 + 6

Must be preceded or accompanied by Chemistry 1a and 2a.

Precedes Pharmaceutical Chemistry 9, 11, 15, and Pharmacy 17, 18; precedes or accompanies Pharmaceutical Chemistry 15a and Materia Medica 2.

A general study of qualitative analysis. The lectures deal with the theories of qualitative analysis and the practical methods of separation and identification of metals and acid radicals, including rules of solubility which form the basis of a scheme of separation for use in the analysis of unknown mixtures.

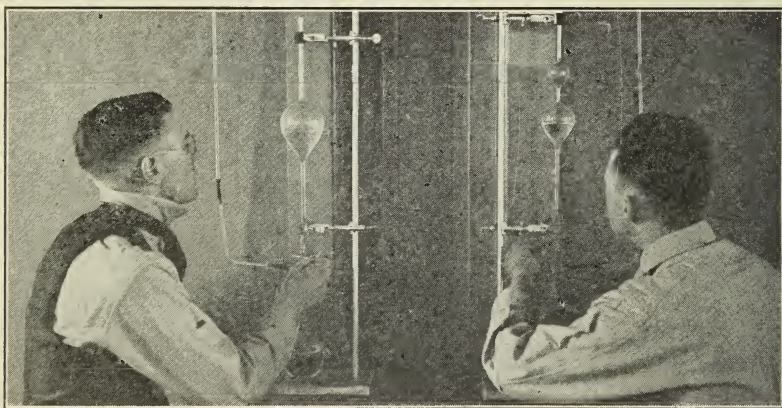
In the laboratory a number of unknown mixtures, both in liquid and solid form, are analyzed. Professor Jordan; Mr. Burlage.

8a. Qualitative Analysis.—Sem. 2. 2 + 6

Alternative with Chemistry 4 for Pharmacy students who have completed Pharmaceutical Chemistry 8.

This course is virtually a continuation of Pharmaceutical Chemistry 8, particular attention being given to the theory underlying the principles of analysis. The lectures deal with the theory of electrolytic dissociation, the law of chemical equilibrium, etc.

Application of this theory is made in the laboratory, together with the analysis of more difficult compounds. Professor Jordan.



Calibration of Apparatus

9. Quantitative Analysis.—Sem. 1. 2 + 6

Must be preceded by Pharmaceutical Chemistry 8 or its equivalent.

Precedes Pharmacy 20 and Pharmaceutical Chemistry 17, 18; alternative with Chemistry 5, 6 as prerequisite for Pharmaceutical Chemistry 13 and 14.

General quantitative analysis. The lectures deal with the theories and practical technique of analytical determinations.

In the laboratory, quantitative analysis of compounds are made by both gravimetric and volumetric methods. Professor Jordan; Mr. Burlage.

11. Incompatibilities and Organic Analysis.—Sem. 1.**1 + 3**

Must be preceded by Pharmaceutical Chemistry 8 or its equivalent, and preceded or accompanied by Pharmaceutical Chemistry 15.

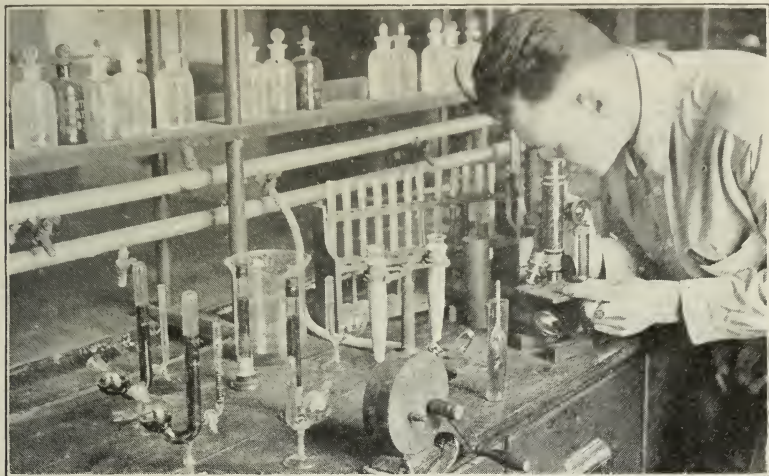
Precedes or accompanies Pharmacy 17.

This work includes:

(a) A careful study and laboratory demonstrations of incompatible mixtures and how to overcome them.

(b) The identification of medicinal organic compounds by means of qualitative tests, with special attention to Pharmacopoeial purity standards. The laboratory work also includes the separation and identification of important alkaloids, toxicology and practical urinary analysis.

Professor Jordan; Mr. Zufall.

**Analyzing Urine****13-14. Food Analysis.—Sem. 1 and 2.****1 + 6**

Must be preceded by Chemistry 5 and 6, or Pharmaceutical Chemistry 9, and by Pharmaceutical Chemistry 15.

A general study of the analysis of foods. The lectures deal with methods used by the U. S. Government and other standard methods of analysis.

In the laboratory milk, butter, fats, oils, meats, vinegar, canned goods, baking powders, extracts, etc., will be subjected to chemical analysis with special attention given to the detection of adulterants and impurities. Chemical analysis is supplemented by the use of microscope, polariscope, and refractometer whenever applicable.

Professor Jordan.

15. Organic Chemistry.—Sem. 1.**4 + 0**

Must be preceded by Chemistry 1, 2 or 1a, 2a or equivalent.

Precedes Pharmaceutical Chemistry 13, 14, 15a, 17 and 18; precedes or accompanies Pharmacy 17, 18, Materia Medica 4, 16, and Pharmaceutical Chemistry 11.

These lectures deal with the principal classes of organic compounds, their theoretical structure and class reactions. Special attention is given to those organic compounds that are of medicinal importance.

Professor Gidley; Mr. Zufall.

15a. Organic Chemistry.—Sem. 2.**2 + 6**

Must be preceded or accompanied by Pharmaceutical Chemistry 8, or its equivalent, and preceded by Pharmaceutical Chemistry 15.

Advanced organic theory with laboratory preparation of aliphatic and aromatic compounds of the more important types. Medicinal organic synthetics will receive especial attention. Certain analin dyes will also be produced and studied.

Prof. Gidley and Mr. Burlage.

16. Pharmaceutical Research.—Sem. 1 or 2.**2 + 6**

In this course the student is given an opportunity to do special work in Pharmaceutical Chemistry, Pharmacy, or Materia Medica. Difficult pharmaceutical problems will be attacked under the careful guidance of the professor in charge. The recommendation of the department is necessary for assignment to this course.

Professors Jordan and Gidley; Mr. Zufall.

17-18. Physiological Chemistry.—Sem. 1 and 2.**1 + 3**

Must be preceded by Pharmaceutical Chemistry 9 and 15 or equivalent.

Lectures and practical training are given in those lines, exclusive of bacteriology, which are essential to the physician's correct diagnosis, the details of which are being asked more and more of the competent pharmacist.

Important features of the laboratory work include thorough drill on chemical and microscopic urine analysis, direct and differential blood counts, spectroscopic tests for various pathologic hemoglobins, blood tests and stains, hemolysis studies, gastric analysis, enzymes and their estimation, protein and protein-derivative testing and toxicological studies.

Professor Gidley

BIOLOGY

Professor Coulter in charge.

Professors Coulter, Terry and Behrens; Assistant Professor Tetrault; Instructors Baldwin, James, Kohl; Assistants Dunham, Stuppy and Zebrowski.

3. Histology of Medicinal Plants.—Sem. 1. 2 + 2

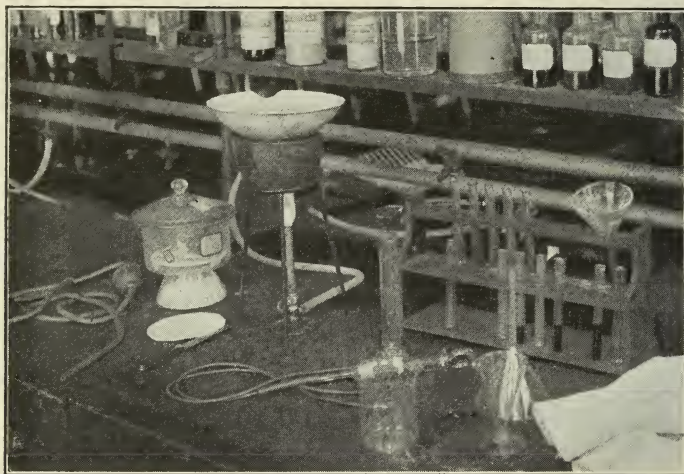
This course includes a study of the microscope—its use and care, a general knowledge of leaf, stem and root structure and such modifications, outgrowths and peculiarities of the above parts as are of consequence in dealing with medicinal plants or identifying them in the form of powdered drugs.

Mr. Kohl.

4. Pharmaceutical Botany.—Sem. 2. 2 + 2

This course seeks to acquaint students with the local medicinal plants, their collection and classification. Stress is laid upon botanical terms and usage.

Mr. Kohl.



Apparatus Used in Physiological Chemistry

18. Bacteriology.—Sem. 1. 2 + 4

Must be preceded by Biology 1-2.

Precedes Biology 19, 19a, 61, 62, 69.

A course in General Bacteriology introducing the student to the general biology of micro-organisms. The various media are prepared and methods of detection, isolation and identification are applied. The bacteriology of water, milk, and soil and a study of the moulds and yeasts are also included.

Professors Behrens and Tetrault; Messrs. Baldwin and Stuppy.

19. Bacteriology.—Sem. 2. 2 + 4

Must be preceded by Biology 1-2 and 18.

Precedes Biology 61 and 62.

This course deals exclusively with pathogenic bacteria and protozoa. The way in which they produce disease, their attenuation, the production of immunity, their sources of infection and the methods of prevention are carefully considered.

Animal inoculation, post-mortem examinations, serum reactions and special staining methods are employed for diagnostic work.

Professors Behrens and Tetrault; Messrs. Baldwin and Stuppy.

36. Microscopic Technique and Histology.—Sem. 1. 2 + 4

Must be preceded by Biology 1-2.

Precedes Biology 37 and 38.

A study of the microscope as an instrument for investigation. Special attention is given to the methods of studying animal histology, injections, hardening of tissues for section cutting, staining and the use of the microtome. Each student is required to prepare a series of permanent slides of all the more important tissues of the mammalian body, comparisons being made with human material when this is desirable.

Typical fields are drawn in ink and when advisable water-color tinting is used for details. Each slide is thoroughly discussed in a written report.

Mr. James.

46. Physiology and Hygiene.—Sem. 1. 3 + 0

Precedes Materia Medica 12.

Lectures, demonstrations and text-book work upon the fundamental principles of the Anatomy, Physiology and Hygiene of the human body.

Mr. James.

61. Advanced Bacteriology.—Sem. 1. 2 + 4

Must be preceded by Biology 18-19; Chemistry 29-30; Physiological Chemistry is strongly recommended.

Precedes Biology 62 and 65.

This course is designed to familiarize the student with the most advanced practical methods of investigation.

It includes glass-blowing; determination of the H-ion concentration; testing of antiseptics and disinfectants; detection of pathogenic organisms in sections; filtration by the Pasteur-Chamberland, Berkefeld, and the collodion sac systems; preparation of special media for the isolation, detection and identification of pathogenic micro-organisms; inoculation, immunization and bleeding of animals; the preparation of tuberculin; diphtheria and tetanus toxins; antitoxic and anti-infectious sera, autogenous and stock bacterial vaccines and blood stains. Blood parasites, such as spirochaetes, trypanosomes, etc., will be studied in living and stained conditions. Each student will be required to read references in American and foreign periodicals.

Professor Behrens; Mr. Baldwin.



Bacteriology Laboratory

62. Serology.—Sem. 2. 2 + 4

Must be preceded by Biology 61.

This course considers the latest methods of serum diagnosis.

The preparation of agglutinins, precipitins, cytolytins, and opsonins; serum reactions, such as the typing of the pneumococcus and meningococcus; absorption tests; and the forensic application of the biological reactions are carefully expounded. Special attention will be given to the Wassermann and the colloidal gold tests for syphilis.

Special references will be assigned and conferences held.

Professor Behrens and Mr. Baldwin.

66-67. Bacteriology.—Sem. 1 and 2. 2 + 0

The subject of Bacteriology in its practical applications is presented in the lectures given in connection with the fuller line of study in Biology 18-19.

Professor Behrens.

CHEMISTRY

Professor Evans in charge.

Professors Evans, Mahin, Middleton, Test and Carr; Assistant Professors Anderegg, Nelson and Mellon; Instructors Davis, Duncombe, Foresman and Williams; Assistants Adams, Botts, Havey, Pollard, Sharets, Siegesmund, Wilson and Wray, and Misses Barr and Clark.

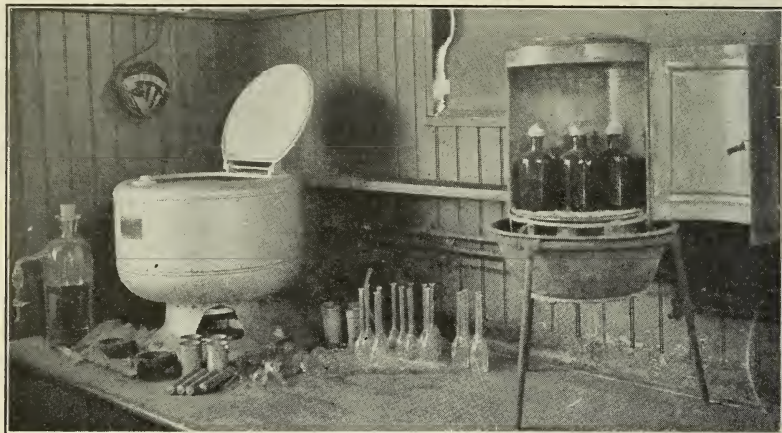
1a-2a. General Chemistry; Advanced Course.—Sem. 1 and 2. 2 + 3 or 4

Precedes Animal Husbandry 9; Chemistry 3-4 and 29-30; Home Economics 11-12; and precedes or accompanies Agronomy 22 and Pharmaceutical Chemistry 8.

A general survey of the science of Chemistry from a theoretical rather than descriptive standpoint. The lectures are illustrated by experiments and deal mainly with the non-metallic elements and their compounds and the fundamental theories of the science. Some typical metallic elements are studied during the second semester. The laboratory work follows the lectures closely and is largely quantitative in character.

The advanced course is for students in Chemical Engineering and Pharmacy and for others who have had a year of Chemistry in High School; progress is more rapid, and considerable attention is given to the Chemistry of the metallic elements.

Professors Test and Nelson; Messrs. Davis, Duncombe, Adams, Botts, Havey, Pollard, Sharetts and Wray; Miss Clark.



Centrifuge and Sterilizer

3-4. Qualitative Analysis.—Sem. 1 and 2.

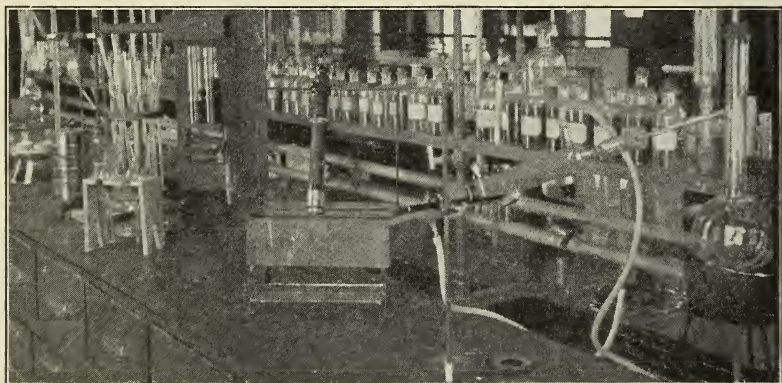
2 + 6

Must be preceded by Chemistry 1-2 or 1a-2a.

Precedes Chemistry 5-6.

A study of the more common metals and their compounds, based on the periodic law, precedes the study of systematic analysis. The lectures are illustrated by experiments and deal with underlying principles of analysis, particularly the application of the theories of electrolytic dissociation and chemical equilibrium. The simpler equilibrium relations are considered quantitatively and familiarly with the solution of quadratic equations and the use of logarithms is assumed. The laboratory work includes the identification of the common minerals by the methods of blow-pipe analysis.

Professor Middleton; Mr. Williams.



Apparatus Used in Food Analysis

5-6. Quantitative Analysis.—Sem. 1 and 2.

2 + 6

Must be preceded by Chemistry 3-4.

Precedes Chemistry 9-10, 11-12, 15-16, 17-18, 19-20; Chemical Engineering 1-2; Home Economics 16 and 17; precedes or accompanies Chemistry 7-8; alternative with Pharmaceutical Chemistry 9 as prerequisite for Pharmaceutical Chemistry 13-14.

A study of the elements of quantitative analysis both gravimetric and volumetric, including electrolytic methods, and the calibration of weights and volumetric apparatus. Special attention is given to theory and general principles as essentials for accurate work.

The course provides the necessary preparation for later work in applied analysis given in Courses 9-10.

Professors Mahin and Mellon; Mr. Siegesmund.

11-12. Special Chemistry.—Sem. 1 and 2. 2 + 6

Must be preceded by Chemistry 5-6, 7-8.

Advanced work of a special character, particularly research.

The course is intended only for those who have shown special ability and industry, and assignment will be made only on the recommendation of the professor concerned and the head of the department.

Professors Evans, Mahin, Middleton, Test, Carr, Anderegg, Nelson and Mellon.

17-18.—Theoretical Physical Chemistry.—Sem. 1 and 2. 3 + 0

Must be preceded by Chemistry 5-6 and 7-8, and Mathematics 13-14.

The lectures deal with the constitution of matter, the general properties of gases, liquids and solids, the phenomena of solutions, and the special topics of colloids, electrochemistry, thermochemistry, chemical statics and dynamics, photochemistry and the phase rule.

Professor Anderegg.

ENGLISH

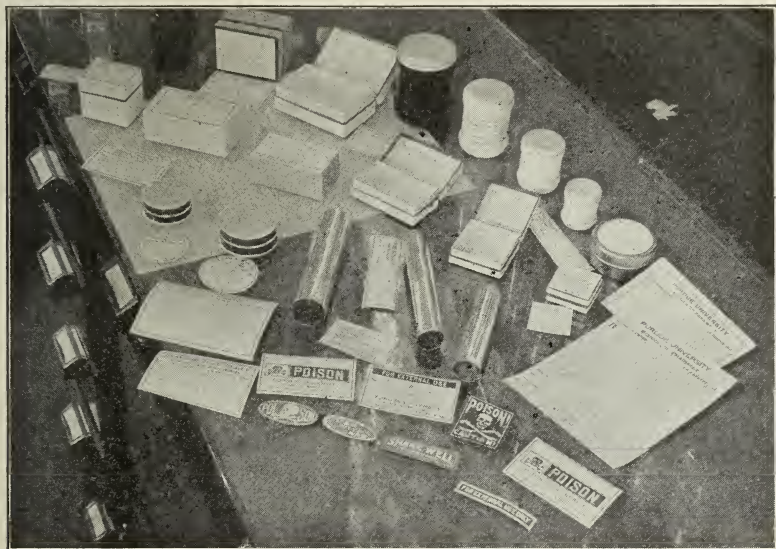
Professor Creek in charge.

Professors Creek, Shoemaker and Liddell; Associate Professor Fore; Assistant Professors Sidwell and McKee; Instructors Babcock, Baldwin, Cordell, Densford, Kidd, Mountain, Perry, Powell, Siegfried; Miss Brendemuhl; Mrs. Parker.

1-2. English Composition.—Sem. 1 and 2. 3 + 0

Precedes English 5, 7a, and 10.

Professors Creek, Fore, Sidwell and McKee; Messrs. Babcock, Baldwin, Cordell, Densford, Kidd, Mountain, Perry, Siegfried; Miss Brendemuhl and Mrs. Parker.



Showing Pharmacy Containers

1b. English Composition.—Sem. 1 or 2. 3 + 0

Students whose preparation in English is found to be seriously deficient are required to take this course, in which a thorough drill in grammar, punctuation, spelling, and sentence-structure is given. The accomplishment expected of the students at the end of the semester is substantially the same as that expected of students in English 1, and the students who pass are admitted to English 2.

Professors McKee and Sidwell; Messrs. Baldwin, Cordell, Perry, Siegfried and Mrs. Parker.

5-6. A Survey of English Literature.—Sem. 1 and 2. 3 + 0

Must be preceded by English 1-2.

The historical development of English literature from Chaucer to the end of the nineteenth century is studied. Extensive reading from the most important writers is required. The course is a valuable preparation for advanced work in English literature.

Professors Liddell, Fore, and Sidwell; Mrs. Parker.

7a. Argumentation.—Sem. 1 or 2. 3 + 0

Must be preceded by English 1-2.

The purpose of the course is to train in accuracy and readiness of thought and speech. Practice is given in the preparation of briefs and in oral debates.

Professor McKee; Instructors Babcock, Baldwin, Powell and Siegfried.

8-9. Modern Prose Forms.—Sem. 1 and 2. 3 + 0

In the first semester special attention is given to autobiography, biography, letters, journals, and diaries. In the second semester the short story is studied. Term papers on collateral reading are required, and there is practice in the writing of the various forms.

Professor Shoemaker.

10. The Nineteenth Century Essay.—Sem. 1 or 2.

Must be preceded by English 1-2.

A study of a small number of nineteenth century writers, with special emphasis on their contributions to modern thought. A great deal of written work, based upon the reading, is required.

Professors Creek, Sidwell and McKee; Instructors Cordell, Densford, Kidd and Mountain.

MODERN LANGUAGES

Professor Babson in charge.

Professors Babson, Heiss and Cattell; Associate Professors Gunn, Greenfield, Greiner, Spindler and Shulters; Assistant Professor Wikel; Instructor Miss McAlpine.

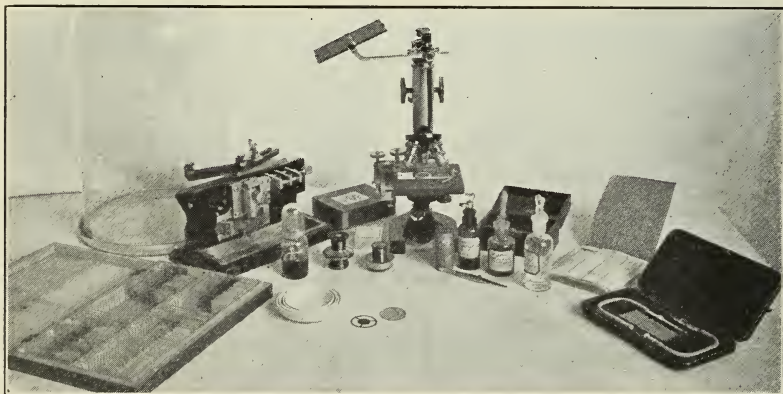
21-22. Beginning French.—Sem. 1 and 2. 3 + 0

Required of Freshmen in Science who do not elect German or Spanish; required of Sophomores in Pharmacy who do not elect German; elective for students in Science, and elective (if both are taken and if followed by 23-24) for Juniors in Agriculture, and Juniors in Pharmacy.

Precedes French 23-24.

The principles of French grammar and syntax are studied and modern prose is read. Stress is laid upon the oral and the written use of the language.

Professors Babson, Cattell and Gunn.



Microscope and Accessories

21a-22a. Intermediate French.—Sem. 1 and 2. 3 + 0

Required of Freshmen in Science who have studied French for at least two years and who do not elect German or Spanish; required of Sophomores in Pharmacy who have studied French for at least two years and do not elect German; elective (if both are taken under the same conditions) for students in Science.

Precedes French 23a-24a.

The principles of French grammar and syntax are studied in more comprehensive and advanced form than in French 21-22. Modern prose is read. Particular stress is laid upon the oral and written use of the language.

Professor Greenfield.

23-24. Intermediate French.—Sem. 1 and 2. 3 + 0

Required of Sophomores in Science and Juniors in Pharmacy who have already obtained credit in French 21-22. Elective (if both are taken) for Seniors in Agriculture and Pharmacy.

Must be preceded by French 21-22.

The study of grammar and syntax is continued by means of composition and conversation, whereby the foundation of a general vocabulary is laid. Modern prose is read.

Professors Cattell and Greiner; Miss McAlpine.

23a-24a. Advanced French.—Sem. 1 and 2. 3 + 0

Required of Sophomores in Science and Juniors in Pharmacy who already have obtained credit in French 21a-22a.

Must be preceded by French 21a-22a. Precedes French 25-26.

Composition, conversation and advanced reading form the basis of work for the acquirement of a practical knowledge of the language. Professor Shulters.

51-52. Beginning German.—Sem. 1 and 2. 3 + 0

Requirement of Freshmen in Chemical Engineering who have not already studied German. Required of Sophomores in Pharmacy who do not elect French. Required of Freshmen in Civil, Electrical and Mechanical Engineering who do not elect French, Spanish or History 9-10.

Precedes German 53-54, and 55-56.

Facility and accuracy of translation are sought by means of careful grammatical drill, and reading of modern prose. Composition forms an important element in the instruction. Professors Heiss, Greenfield and Wikel.

51a-52a. Intermediate German.—Sem. 1 and 2. 3 + 0

Required of Freshmen in Chemical Engineering who have studied German for at least two years. Required of Sophomores in Pharmacy who have studied German for at least two years, and do not elect French. Required of Freshmen in Civil, Electrical and Mechanical Engineering who have studied German for at least two years and who do not elect French, Spanish or History 9-10.

Precedes German 53a-54a, and 55a-56a.

Comprehensive and rapid review of German grammar; reading of modern prose; practice in composition and speaking; the acquirement of a practical vocabulary.

Professors Spindler and Wikel.

55-56. Advanced German.—Sem. 1 and 2. 3 + 0

Must be preceded by German 51-52.

Precedes German 57.

Literary and technical prose is read, especially that pertaining to Chemistry; stress is laid upon the acquirement of a practical vocabulary. As opportunity is offered, conversation is practiced. Professors Heiss and Gunn.

55a-56a. Advanced German.—Sem. 1 and 2. 3 + 0

Must be preceded by German 51a-52a.

Precedes German 57.

Literary and technical prose is read, both in kind and in amount of a more advanced nature than that required in Courses 55-56. Especial attention is given to the acquirement of a practical scientific vocabulary. Conversation is practiced. Professor Greenfield.

57. Advanced Scientific German.—Sem. 1. 3 + 0

Must be preceded by German 55a-56a.

Prose selections on chemical subjects are read. Professors Heiss, Spindler and Wikel.

MATHEMATICS

Professor Marshall in charge.

Associate Professors Hadley, Mason; Assistant Professors Hodge, Robbins and Stone; Instructors Berry, Branson, Frazier, Hardman, Keller, Knox, Raiford, Reid, Shock and Waits.

11-12. Elementary Analysis and Applications.—Sem. 1 and 2. 3 + 0

Precedes Mathematics 13-14.

This Course presents selected topics from Trigonometry and Algebra and other branches of elementary analysis which are fundamental in the biological, chemical, and physical sciences and makes numerous applications to problems which confront students of agriculture and general science.

Professors Hodge, Mason and Robbins; Dr. Berry; Messrs. Branson, Frazier, Hardman, Keller, Knox, Raiford, Reid, Shock and Waits.

13-14. Analytical Geometry and Calculus.—Sem. 1 and 2. 3 + 0

Must be preceded by Mathematics 11-12.

Precedes Chemistry 15, 16, 17, 18.

Professor Hadley.

HISTORY

Professor Moran in charge.

Professor Moran; Assistant Professor Sears; Instructors Smith, Phillips and Andrews.

1. History of the 19th Century.—Sem. 1 or 2. 3 + 0

Professor Sears; Messrs. Phillips and Andrews.

EDUCATION

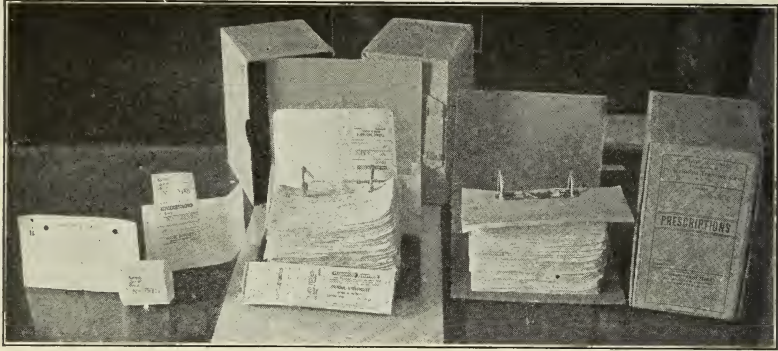
Professor Roberts in charge.

Professors Roberts, Cromer, and Brandenburg; Associate Professor Hall; Assistant Professor Tilton; Instructors Townley and McCoy; Assistants Hummel, Pigg, Pershing, and Lee; with Superintendents Burtsfield and Horton co-operating.

1. General Psychology.—Sem. 1. 3 + 0

An introduction of the study of the normal adult mind including demonstrations and elementary experiments illustrative of the physiological basis of mental states.

Professor Brandenburg; Messrs. Townley and McCoy.



Prescriptions and Files

2. Educational Psychology.—Sem. 2. 3 + 0

Must be preceded by Education 1.

The course is designed to familiarize the student with the relationships between elemental human traits and tendencies and educational procedure. The application of psychological principles to the teaching of vocational education is emphasized. Consideration is given to instinctive tendencies, habit formation, memory, the learning process, affective life, and thought processes.

Professor Brandenburg; Messrs. Townley and McCoy.

3. History of General and Vocational Education.—Sem. 1. 3 + 0

This course involves the study of the development of various conceptions of educational values; the development of educational theory and practice; and the development of educational problems and methods in relation to the growth and establishment of vocational education in the United States and foreign countries. Special emphasis also is placed upon the problems of vocational education as presented by recent State and Federal legislation.

- (a) Vocational Agricultural Education.
- (b) Vocational Home Economics Education.
- (c) Vocational Industries and Trades Education.

Professor Cromer.

Professor Tilton.

Professor ———.

4. Principles and Methods of Teaching.—Sem. 2. 3 + 0

This course involves the discussion of the technique of teaching, aiming to make more logical and more scientific the thought about teaching. A careful study is made of the fundamental principles which underlie classroom instruction and management and the problems of teaching. The principles and methods which are involved in the successful teaching of Agriculture, Home Economics, and Industrial Arts in secondary and vocational schools are given particular attention. Observation of actual teaching with detailed reports and classroom discussion is included.

- (a) Vocational Agricultural Education.
- (b) Vocational Home Economics Education.
- (c) Vocational Industries and Trades Education.

Professor Cromer.

Professor Tilton.

Professor ———.

PHYSICS

Professor Ferry in charge.

Professors Ferry and C. M. Smith; Assistant Professors Sherman, Abbott and Bair; Instructors Mitchell and Cutshall; Assistant Wackmann.

1. General Physics.—Sem. 1. 4 + 0

Must be preceded by Mathematics 1-2 or 11-12.

Precedes Applied Mechanics 2; Electrical Engineering 1, 2, 5, 6, and 34; Mechanical Engineering 31; precedes or accompanies Mechanical Engineering 11; and precedes Physics 2, with all advanced courses in Physics.

Professors Ferry, Smith, Sherman, Abbott and Bair; Miss Mitchell; Messrs. Cutshall and Wackmann.

2. General Physics.—Sem. 2. 4 + 0

Must be preceded by Mathematics 1-2 or 11-12 and Physics 1.

Precedes Civil Engineering 9, 10; Electrical Engineering 5, 6, 9, and 10; prerequisite for all advanced course in Physics; precedes or accompanies Mechanical Engineering 31.

This line of study includes a systematic development of principles together with a consideration of the practical applications of the principles to the affairs of ordinary life. It is the first line of study in Physics for students who are preparing to teach the subject.

Professors Ferry, Smith, Sherman, Abbott and Bair; Miss Mitchell; Messrs. Cutshall and Wackmann.

PHYSICAL EDUCATION

Director Kellogg in charge.

Director Kellogg; Messrs. Lambert, O'Connor, Clevett, Phelan, Barr, Mann.

This department has supervision over the recreational and athletic life of the University. It aims to carry out on an equal footing both the competitive side, which is composed of the various University teams, and the recreational side, an elaborate system of intramural sport.

The work of this department is conducted in close co-operation with the Department of Military Training, and due allowance is made for physical training obtained in connection with drill.

The gymnasium and swimming pool are set apart for the use of the women students one evening each week, under a competent instructor.

The work of the year is divided into three seasons: outdoor, indoor, and outdoor, as follows:

1. Outdoor Work.—September to November.

Intercollegiate football and cross-country; intramural football, tennis and handball. Opportunities are also offered for canoeing, swimming and golf.

Physical examinations are required for every man taking part in intercollegiate athletics.

2. Indoor Gymnasium Work.—November to April.

Intercollegiate basketball, track, swimming, wrestling and gymnastics. Intramural boxing, indoor baseball and basketball. Volley ball, fencing, and handball. There are also opportunities for skating.

3. Outdoor Work.—April to June.

Intercollegiate baseball, track and tennis. Intramural baseball, tennis, track, and golf. Spring football, handball and swimming.

Coaching Course.

In connection with the Department of Education, a course in coaching, football, basketball, baseball and track, is given by the members of the Athletic Department. For detailed information, either the Department of Education, or the Department of Physical Education may be consulted.

MILITARY TRAINING

Major Johnson, U. S. Army, in charge.

Majors Johnson, Cole and Wallace; Captains Vestal, Canine and Bryant; Lieutenant Floyd and seven Sergeant Instructors.

The act of Congress endowing the University requires that Military Science and Tactics be taught. In order to receive the benefits of recent legislation, and to afford an outlet and stimulus for the work, the Military Department is administered as a unit of the Reserve Officers' Training Corps. The course of instruction is both practical and theoretical in Field Artillery service, and is under the direction of an officer of the United States Army, detailed for that purpose, assisted by officers and non-commissioned officers from the Regular Army.

Military Training is compulsory for all physically fit, non-alien, male students of the two lower classes. Excuses are granted only in exceptional cases, and then only in accordance with the published regulations of the University.

Military Training is optional for Juniors and Seniors. Students enrolled in the advanced R. O. T. C. courses receive credit toward graduation for the work done. Aside from the advantage of military knowledge, the benefits of healthful exercise, strict discipline and the opportunity for a correction of minor physical defects, this course is of great value to the student for its development of initiative, self-confidence and ability to handle men.

Under no condition can the members of the Reserve Officers' Training Corps at Purdue be called out for active service. It is an organization fostered by the federal government for instructional purposes only.

The U. S. government will provide each cadet with a complete uniform and the equipment of a Field Artillery soldier, or the money equivalent. To cover any loss of or damage to the uniforms, except that due to fair wear and tear, to pay for books not procurable commercially, and to pay for such articles of uniform as are not furnished by the government, it is required that \$15 be deposited with the Military Department at registration. The balance remaining when the student has completed his military instruction or has become separated from the University, will be returned to him.

The Corps of Cadets is organized as two Regiments of Field Artillery, as prescribed for the Regular Service, i. e., each regiment has one band and two Battalions of three Batteries each with proper Field, Staff, and Battery Cadet Officers. Students enrolled in the advanced courses from the Junior and Senior classes are given preference in the appointment of Cadet Officers and Cadet Non-Commissioned Officers.

Cadets of the Freshman and Sophomore classes who are good musicians will be given preference of assignment to the Cadet Band. Such students will provide their own instruments and will be required to do work equivalent to that done by cadets of other organizations.

Cadets of the Junior and Senior classes who contract in writing to devote five hours per week to the prescribed course, and to attend one summer camp of six weeks, will receive compensation from the federal government at the rate of about \$12.00 per month during the school year, and camp expenses. Those who complete the four years' course in a satisfactory manner will be eligible to become Reserve Officers in the United States Army, and will receive upon graduation a special Military Diploma from the University.

1-2. Military Training.—Sem. 1 and 2. 0 + 5 (Fresh.)

The Freshman basic course includes preliminary training, followed by cannoneer instruction, ordnance, gunnery, motor driving and battery drill, battery organization and administration, military hygiene and sanitation; physical training.

3-4. Military Training.—Sem. 1 and 2 0 + 5 (Soph.)

The Sophomore basic course includes military topography and orientation; gasoline motors and motor vehicles; duties of specialists; physical training.

FAIRCHILD SCHOLARSHIP IN PHARMACY

This scholarship of \$300 is offered annually by Mr. Samuel W. Fairchild, of New York City, to further research in pharmacy. It is awarded on the basis of a competitive examination to candidates who are high school graduates and who have successfully finished their first year's work in a school or college of pharmacy or department of pharmacy of a university, member of the American Conference of Pharmaceutical Faculties. Each school, college or department of pharmacy is limited to two candidates.

INSPECTION TRIP

An annual inspection trip requiring two days is provided for the Senior students. One day is spent in the city of Indianapolis inspecting the most important professional and commercial pharmacies, the wholesale drug houses, glass factory, etc. The second day is devoted to the inspection of Eli Lilly & Co.'s manufacturing laboratories, their biological plant and drug plant gardens.

The inspection trip is made a part of the course and is conducted as a class exercise, especial attention being called to all important operations.

OPPORTUNITIES

The Purdue School of Pharmacy offers splendid opportunities for securing a thorough professional training. It is an integral part of the University and its students meet all the requirements demanded of students in the other departments of the University. Thus Pharmacy students stand upon an equal footing with the students of other departments and enjoy all the advantages and privileges of a university training. Among these advantages may be mentioned the following: Membership in technical, debating, and literary societies; attendance at many important technical and general lectures; association with a cosmopolitan student body; participation in athletics; drill in military tactics, etc.

The most necessary acquirements of the scientifically trained pharmacist is the ability to fill prescriptions accurately and understandingly, and to this end pharmaceutical education at Purdue is specially directed. The written order of a physician for medicinal agents to be used in the treatment of the sick is held too sacred for merely empirical handling unaccompanied by an intimate acquaintance with underlying principles. Purdue students are therefore trained with a view to such fundamental mastery.

The prescription room is very complete and entirely modern, and conduces to most efficient training in the art of compounding. The students study and fill a great variety of prescriptions, which have been sent in by druggists from various parts of Indiana and other states. This feature has a peculiar advantage of helping the student to become familiar with prescriptions of every character. Not only is a student carefully directed in compounding these prescriptions, but he is taught a system of numbering, pricing and filing the prescriptions as they are filled. Instruction is given also in the filling and recording of narcotic prescriptions.

The School of Pharmacy takes an active part in the work of the Medical and Infirmary Service of the University as a whole, and compounds and dispenses all the medicines for this service. The Senior students compound and dispense hundreds of prescriptions under the careful instruction and guidance of a registered pharmacist. In this way they have a practical application of their instruction in compounding.



DIRECTORY OF THE ALUMNI FOR THE YEARS 1911-1921

NOTICE TO ALUMNI

Since changes in location and position are made frequently, it is almost impossible to keep a printed directory up to date. In the Registrar's Office a Card Index Directory is kept and changes made as soon as information of change is received. We earnestly request the Alumni to notify the Registrar's office of any change in location or position, that this Card Index Directory may be accurate, and correct information concerning the activities of classmates supplies.

GRADUATES OF 1911

Degree of Pharmaceutical Chemist

- A. L. BOLLINGER, Proprietor of Crescent Pharmacy, Frankfort and Stilz Aves., Louisville, Ky.
- H. O. BUSH, General Lumber and Tie Inspector, Erie Railroad Co., 50 Church St., New York.
- L. H. CLEVINGER, Joint Proprietor of Clevenger & Gates Pharmacy, Eaton, Ind.
- R. G. CROWDER, Proprietor of Crowder's Pharmacy, Bedford, Ind.
- C. DERBYSHIRE, Sales Dept., Tractor-Train Co., Connersville, Ind.
- L. G. DRISKELL, Proprietor of Driskell Drug Store, Monon, Ind.
- H. W. FLEMING, Pharmacist, Betles' Pharmacy, 1406 E. Church St., Jacksonville, Fla.
- O. G. GASKILL, Pharmacist, Markle, Ind.
- M. GENOLIN, Proprietor of Genolin's Pharmacy, Rankin, Ill.
- B. M. GILDERSLEEVE, Proprietor of Gildersleeve Drug Co., Kansas, Ill.
- K. H. GOHMANN, Pharmacist, U. S. Public Health Service, Chicago, Ill.
503 Elm St., New Albany, Ind.
- R. C. HARDIN, Proprietor, Hardin Drug Co., Robinson, Ill.
- F. S. HAYWARD, Manager of Hayward Pharmacy, Rosedale, Ind.
- G. W. IRWIN, Proprietor of Irwin's Pharmacy, Roachdale, Ind.
- HAZEL LOEHR (Mrs. H. J. Schilling), 655 Perrin Ave., LaFayette, Ind.
- R. L. LOSER, Manager of Meyer Brothers Drug Co., 940 High St., Ft. Wayne, Ind.
- W. S. MILLER, Chief Chemist, Chas. C. Kawin Co., 94 Dun Bldg., Buffalo, N. Y.
- E. H. MILLS, Partner, Mills & Haynes Drug Store, 1226 N. Indiana Ave., Kokomo, Ind.
- R. E. MORSE, Deceased.
- G. T. NANTZ, Absorber Man, Standard Oil Co., Box 371, Taft, Cal.
- F. A. OPEL, Proprietor of The Steger Pharmacy, Steger, Ill.
- A. L. PAYNTER, Proprietor of Read Drug Co., Anderson, Ind.
- T. O. PHILPOTT, President and Manager, Philpott Drug Co., Inc., 902 N. Illinois St., Indianapolis, Ind.
- P. P. PIERCE, Sales Manager for Kempf-Pierce Co., 1110 Main St., Apt. 9, Buffalo, N. Y.

- DR. JORGE A. QUINTERO, Proprietor of Quintero's Farmacia, Yaguajay, Provincia de Sta Clara, Cuba.
- G. W. RIPLEY, Treasurer of The Clemmer & Johnson Co., 106 W. Moreland Terrace, Akron, O.
- S. O. ROY, Partner City Drug Store, Sardis, Miss.
- C. H. RUSSELL, Proprietor of City Hall Pharmacy, 333 Walnut St., Terre Haute, Ind.
- O. G. SALB, Chief Chemist, Kirk Chemical Co., Memphis, Tenn.
- V. M. SALB, Proprietor of Crescent Pharmacy, 515 Main St., Jasper, Ind.
- J. E. SEYBERT, Pharmaceutical Chemist, Eli Lilly Co., 304 Kenmore Rd., Indianapolis, Ind.
- G. M. SHEWALTER, Physician, 2540 Main St., Elwood, Ind.
- S. G. SILVERBURG, with J. T. Millikin Co., St. Louis, Mo.
- D. C. SINGLETARY, with Standard Oil Co., P. O. Box 413, H. B. Ranch House, Huntington Beach, Cal.
- H. J. STEINING, Secretary, Wells-Yeager-Best Co., 213 N. 11th St., LaFayette, Ind.
- O. H. STONE, in charge of Stock Depts., Ross Gear & Tool Co., LaFayette, Ind.
- L. C. THOMASON, Address Unknown.
- B. H. THOMPSON, Branch Manager of The B. F. Goodrich Rubber Co., 115 E. Washington Ave., Madison, Wis.
- C. V. TIMMONS, Pharmacist, Blue Drug Store, Peru, Ind.
- E. H. VELLINGER, Partner of The Vellinger Pharmacy, 834 Main St., LaFayette, Ind.
- C. R. WEBER, Deceased.
- H. WILLIAMS, Pharmacist, Alvarado Pharmacy, Albuquerque, N. M.

GRADUATES OF 1912

Degree of Pharmaceutical Chemist

- C. H. BERNIS, Proprietor, Bernis' Pharmacy, Dugger, Ind.
- H. W. CONLIN, Secretary of Plaster Drug Co., 108 Vermilion St., Danville, Ill.
- C. J. EASLEY, Proprietor of Easley's Pharmacy, Clay City, Ind.
- M. D. FAIRMAN, Pharmacist, J. R. Phillippi Drug Co., 3009 N. Illinois St., Indianapolis, Ind.
- W. H. FOERSTER, Wayne Pharmacal Co., 2017 Maumee Ave., Ft. Wayne, Ind.
- E. T. GREENE, Proprietor of Restaurant, 234 S. Illinois St., Indianapolis, Ind.
- E. F. GUTHRIE, Guthrie's Pharmacy, 112 Burlington Ave., Logansport, Ind.
- R. B. HARVEY, Associate Professor of Plant Physiology and Physiologist, University Farm, St. Paul, Minn.
- H. W. HEINE, Clerk in Charge of LoMar Pharmacy, 1306 Richard St., LaFayette, Ind.
- A. V. KLEIN, Proprietor, The Harrison Hill Drug Store, Ft. Wayne, Ind.
- C. E. LAWSON, Chemist, Furst & McNess Co., 211 S. Cherry Ave., Freeport, Ill.

- F. D. LEEDS, National Cloak and Suit Co., New York.
 R. E. PHELPS, Proprietor, Phelps' Pharmacy, Martinsville, Ind.
 C. R. POWELL, 450 N. Senate Ave., Indianapolis, Ind.
 J. M. QUIGLEY, Pharmacist, Rotheringhouse Brothers Co., Alexandria, Ind.
 L. G. RAINIER, Proprietor, Rainier's Pharmacy, Hartford City, Ind.
 H. F. SMITH, Plaza Hotel, Colorado Springs, Colo.
 G. L. SNYDER, Manager of United Drug Co., 471 Broadway, Bayonne, N. J.

GRADUATES OF 1913

Degree of Bachelor of Science in Pharmacy

- B. W. THOMPSON, Ph. C. '09, Flaherty's Pharmacy, 6155 English Ave., Springfield, Ill.

Degree of Pharmaceutical Chemist

- H. N. EMERSON, Proprietor of Rexall Drug Store, Owensville, Ind.
 E. J. ENDRIS, Prest-O-Lite Co., Indianapolis, Ind.
 W. J. GIFT, Proprietor of Gift's Pharmacy, Converse, Ind.
 BERTHA HATTEN (Mrs. J. A. Whitsell), R. R. No. 3, Twin Falls, Idaho.
 A. S. HENRY, Chief Chemist, Peruna Co., Columbus, O.
 W. M. KNAPP, Proprietor of Knapp's Pharmacy, Washburn, Ill.
 J. B. LANSLEY, Manager, McWilliams Drug Store, 414 Wheeler Ave., Anderson, Ind.
 R. M. WAGGONER, Proprietor, Waggoner & Son Co., 804 S. 7th St., Terre Haute, Ind.

GRADUATES OF 1914

Degree of Bachelor of Science in Pharmacy

- W. M. ALDRICH, Owner, Norwich-Binghamton-Syracuse Bus Lines, 59 Bird-sall St., Norwich, N. Y.
 D. C. BEACH, Research Chemist and Bacteriologist, Norwich Pharmacal Co., Norwich, N. Y.

Degree of Pharmaceutical Chemist

- W. M. ALDRICH, see Bachelor of Science for 1914.
 D. C. BEACH, see Bachelor of Science for 1914.
 C. A. BENWARD, Proprietor of The Benward Drug Store, Churubusco, Ind.
 W. N. BURNS, Partner, Burns & Davis Drug Store, Otterbein, Ind.
 R. I. DAVIS, Chief Clerk, Quartermaster's Dept., Marion National Sanatorium, Marion, Ind.
 W. B. DONHAM, Assistant Cashier of Bicknell Trust & Savings Co., 623 W. 4th St., Bicknell, Ind.
 NELLIE EARHART (Reiter), Deceased.
 H. E. EBERHARD, Partner, J. H. Keiser Drug Co., Columbia City, Ind.
 J. I. GROOM, Chemist, Steel Works of America, 806 Broadway, Gary, Ind.
 C. G. McBRIDE, Automobile Business, Paoli, Ind.
 G. A. MEIHAUS, Production Superintendent, Eli Lilly Co., Indianapolis, Ind.

- C. MOAD, Chemist, Wayne Tank & Pump Co., 1707 Bayer Ave., Ft. Wayne, Ind.
 A. H. NEUKOM, Partner of A. Neukom & Son, 40 Home Ave., Terre Haute, Ind.
 J. G. PORTER, Porter's Pharmacy, Tipton, Ind.
 G. B. PURKEY, Deceased.
 W. W. WAGNER, Assistant Manager of Hook Drug Store, 23 N. 21st St., LaFayette, Ind.
 F. E. WAUGH, Proprietor, Waugh's Drug Store, Attica, Ind.

GRADUATES OF 1915

Degree of Bachelor of Science in Pharmacy

- E. H. WESTLUND, Head of Chemistry Dept., 369 W. Macon St., Decatur, Ill.

Degree of Pharmaceutical Chemist

- D. B. ADAMS, Partner of Reed & Adams, Delphi, Ind.
 L. ATKINSON, Proprietor, Fair Drug Store, 2142 E. Grand Blvd., Detroit, Mich.
 J. C. BEYER, Proprietor, Fairfield Pharmacy, 2012 Fairfield Ave., Ft. Wayne, Ind.
 R. L. CIMMERMAN, West Drug Stores, 91-93 Monroe Ave., Grand Rapids, Mich.
 F. M. CRAVENS, Proprietor, Cravens' Pharmacy, Noblesville, Ind.
 W. J. DARE, Pharmacist, Drier Drug Co., 402 W. Jefferson St., Ft. Wayne, Ind.
 W. W. EHRHARDT, Pharmacist, St. John & Guthrie, Greensburg, Ind.
 BEATRICE FANSLER (Mrs. J. L. Macdonald), see Bachelor of Science for 1917.
 C. H. GREEN, Sales Dept., Nordyke & Marmon Co., 22 W. 16th St., Indianapolis, Ind.
 V. S. HEATH, Sandborn, Ind.
 H. HOLMES, R. R. No. 5, Bloomfield, Ind.
 ALMA I. LITTELL (Mrs. J. H. Shores), Box 490, Coalinga, Cal.
 W. T. ROOT, Construction Manager, Prairie Pipe Line Co., Box 563, Tulsa, Okla.
 W. C. ROYSE, Owl Drug Co., 431 S. 5th St., Terre Haute, Ind.
 R. M. SMITH, Proprietor of Smith's Pharmacy, Tenth and Main Sts., Vincennes, Ind.
 M. W. TAM, Proprietor, Tam Drug Store, Macon, Miss.
 E. H. WESTLUND, see Bachelor of Science for 1915.

GRADUATES OF 1916

Degree of Bachelor of Science in Pharmacy

- E. F. CRABB, Pharmacist, Gillis Pharmacy, 211 S. Main St., Clinton, Ind.
 NELLIE EARHART (Reiter), Deceased.
 D. J. KAY, Chemist, National Biscuit Co., 85 Ninth Ave., New York City, N. Y.
 M. E. PARKER, Asst. Sup. of Shipping Division, Eli Lilly & Co., 1902 Bellefontaine St., Indianapolis, Ind.

W. L. THOMS, Partner in Drug Business, 456 E. Washington St., Indianapolis, Ind.

Degree of Pharmaceutical Chemist

V. BAUGHER, Pharmacist, Wells-Yeager-Best Co., 809 N. 9th St., LaFayette, Ind.

J. E. BRADY, General Manager of the White-Brady Drug Co., Winchester, Ind.

T. E. BURNS, Manager, Hook Drug Store, Muncie, Ind.

B. T. CHILDS, Superintendent of Capsule Plant, Eli Lilly & Co., Indianapolis, Ind.

E. F. CRABB, see Bachelor of Science for 1916.

A. E. DENISON, Manager, Gillis Drug Co., 815 Beech St., Terre Haute, Ind.

L. FISHER, Proprietor of Fisher's Pharmacy, Ridgeville, Ind.

K. A. GROOM, Chemist, Illinois Steel Co., 322 W. 8th Ave., Gary, Ind.

L. S. HAWKINS, Manager of J. T. Stokes Pharmacy, 226 N. Meridian St., Indianapolis, Ind.

L. O. HILL, Superintendent and Production Manager, Kolynos Dental Cream Co., New Haven, Conn.

K. W. HOFF, Chief Chemist of Kolynos Dental Cream Co., 130 Bristol St., New Haven, Conn.

M. L. KAUFFMAN, 536 E. Oak St., Princeton, Ind.

D. J. KAY, see Bachelor of Science for 1916.

M. E. PARKER, see Bachelor of Science for 1916.

R. D. RICHESON, Pharmacist, Clayton Drug Co., Clayton, Ind.

G. F. STRICKFADEN, see Bachelor of Science for 1918.

W. L. THOMS, see Bachelor of Science for 1916.

R. B. WILKINS, Pharmacist, Oxford, Ind.

D. U. WILLIAMS, L. B. Williams & Son, Marble and Granite Monuments, Spencer, Ind.

GRADUATES OF 1917

Degree of Bachelor of Science in Pharmacy

Beatrice Fansler (Mrs. J. L. Macdonald), Ph. C. 1915, 216 N. "B" St., Gas City, Ind.

Degree of Pharmaceutical Chemist

J. F. BERRY, Proprietor of Pharmacy, 416 Indiana Ave., Indianapolis, Ind.

G. BORDERS, Pharmacist, Arnett's Drug Store, 2801 E. 10th St., Indianapolis, Ind.

B. H. BOWLES, Proprietor of Bowles' Pharmacy, 2101 Central Ave., Indianapolis, Ind.

T. A. BRAMBLE, Manager, Drug Dep't U. S. Veterans Bureau, Louisville, Ky.

P. L. BURRIN, Pharmacist, Eli Lilly & Co., Indianapolis, Ind.

T. C. COLLIER, Proprietor of Pharmacy, 27th and College Ave., Indianapolis, Ind.

R. M. DWYER, Winter Haven Chemical Plant, Winter Haven, Fla.

F. J. FRIDY, Proprietor of North Side Pharmacy, 1301 Main St., Evansville, Ind.

F. W. GOHMANN, Pharmaceutical Chemist, G. H. Gould & Son, Louisville, Ky.

- A. E. GUTHRIE, City Chemist, 1827 North St., Logansport, Ind.
 H. H. HEDGCOCK, see Bachelor of Science for 1919.
 L. R. HESS, Superintendent of Dental Gold Manufacturing, Shreve & Co., San Francisco, Cal.
 J. H. HEWARD, Part Owner of P. & H. Pharmacy, Chesterton, Ind.
 P. HOOVER, Proprietor of Modern Pharmacy, Attica, Ind.
 V. B. HOOVER, W. I. Hoover & Son, Rensselaer, Ind.
 M. C. JOHNS, Proprietor, Gary Drug Co., 1650 Adams St., Gary, Ind.
 R. D. JOHNSON, Pharmacist, National Military Home, Ind.
 M. C. McCALLUM, Chief Pharmacist's Mate, U. S. N., U. S. S. Quincy, care Postmaster, New York City.
 F. D. PALMER, Owner, Drug Store, Fountain City, Ind.
 G. B. SKENE, Proprietor, Brunner's Pharmacy, 1107 N. 13th St., Terre Haute, Ind.
 J. L. WENDT, Proprietor of Scheddell & Wendt Bros., Crown Point, Ind.
 W. K. WENDT, Proprietor of Scheddell & Wendt Bros., Crown Point, Ind.
 S. WILLIAMS, Pharmacist, Kute Drug Co., Elwood, Ind.

GRADUATES OF 1918

Degree of Bachelor of Science in Pharmacy

- T. L. HASBROUCK, Proprietor of Hasbrouck Pharmacy, 7301 S. Halsted St., Chicago, Ill.
 G. F. STRICKFADEN, Chemist and Bacteriologist, Dept. of Health, E. Chicago, Ind.

Degree of Pharmaceutical Chemist

- R. E. BURRIN, Pharmaceutical Chemist for Kiefer-Stewart Co., 850 Eugene St., Indianapolis, Ind.
 T. L. HASBROUCK, see Bachelor of Science for 1916.
 C. A. HYND, Pharmacist, Mills & Haynes Drug Store, 1304 N. Courtland St., Kokomo, Ind.
 B. P. LOCKARD, Pharmacist, Indianapolis, Ind.
 V. P. MEAGHER, Pharmacist, Dawson & Brunner, Cor. 13th & Poplar Sts., Terre Haute, Ind.
 J. R. PHILLIPS, Student at Indiana College of Medicine, Bloomington, Ind.
 W. B. PURKEY, Pharmacist, Peoples Drug Store, Morocco, Ind.

GRADUATES OF 1919

Degree of Bachelor of Science in Pharmacy

- C. C. BARKDELL, 3235 Glenmore Ave., Cincinnati, O.
 MARJORIE A. BARR, Assistant in Chemistry, Purdue University, Lafayette, Ind.
 R. W. CRABB, Pharmacist, Gillis Drug Co., 412 Wabash Ave., Terre Haute, Ind.
 H. H. HEDGCOCK, Chemist and Bacteriologist, E. Chicago Laboratories, 204 E. Chicago Bank Bldg., E. Chicago, Ind.

Degree of Pharmaceutical Chemist

- C. C. BARKDELL, see Bachelor of Science for 1919.
 MARJORIE A. BARR, see Bachelor of Science for 1919.
 R. W. CRABB, see Bachelor of Science for 1919.

GRADUATES OF 1920 *

Degree of Bachelor of Science in Pharmacy

- J. B. BURT, Professor of Pharmacy, University of Nebraska, Lincoln, Nebr.
 JUANITA M. FOLLETT, Pharmacist, Hook Drug Co., LaFayette, Ind.
 M. RAMOUTH HUFF, Bacteriologist in charge of U. S. Veterans Dispensary,
 3038 Dumbarton Ave, N. W., Washington, D. C.
 L. S. TROTH, Chemist, Illinois Steel Co., Box 945, Gary, Ind.

Degree of Pharmaceutical Chemist

- J. B. BURT, see Bachelor of Science for 1920.
 W. S. BUSTEED, Owner of Bill's Confectionery, Paulding, O.
 ADELAIDE EBERSHOFF, Student at Purdue University, School of Pharmacy, LaFayette, Ind.
 JUANITA M. FOLLETT, see Bachelor of Science for 1920.
 G. H. GIFT, Manager of Finishing & Supplies Depts., Parke, Davis & Co., Detroit, Mich.
 E. W. HANLEY, Pharmacist, Meyer Drug Co., 704 Calhoun St., Fort Wayne, Ind.
 R. H. HARKER, Manager of White's Pharmacy, 445 Elm St., Clinton, Ind.
 E. N. HARPER, Asst. Mgr., Meyer Bros., 2002 Broadway, Ft. Wayne, Ind.
 LUCY M. HARTER, Student in Purdue University, School of Pharmacy, LaFayette, Ind.
 M. RAMOUTH HUFF, see Bachelor of Science for 1920.
 MILDRED L. PADGETT, Pharmacist, Miss Emanuel's Chemist Shop, 201 W. Berry St., Fort Wayne, Ind.
 W. R. PADGETT, Proprietor of Peoples Drug Store, Morocco, Ind.
 MARY K. SHOUP, Pharmacist and Instructor in Materia Medica, Union Hospital, Terre Haute, Ind.
 G. D. WALTHALL, Manager of Gillis Pharmacy, 211 S. Main St., Clinton, Ind.
 J. W. WOOD, Manager of White's Pharmacy, 404 N. 9th St., Clinton, Ind.

GRADUATES OF 1921

Degree of Bachelor of Science in Pharmacy

- R. B. ROBERTSON, Pharmacist, Bicknell, Ind.

Degree of Pharmaceutical Chemist

- W. A. BROWN, Proprietor Brown's Drug Store, Camden, Ind.
 L. A. CONGDON, Manager of Congdon's Pharmacy, Bristol, Ind.
 H. W. DECKER, Pharmacist, Goodnight's Pharmacy, 619 N. 8th St., LaFayette, Ind.

- J. C. DUSARD, Pharmacist, University Pharmacy, West LaFayette, Ind.
 R. C. EDWARDS, Pharmacist, Edwards Pharmacy, Oblong, Ill.
 A. LUCILLE HEDRICK, Asst. Pharmacist, Hedrick Drug Co., Wheatland, Ind.
 L. F. HESS, Pharmacist, Hess Pharmacy, Brook, Ind.
 G. E. HUFFMAN, Pharmacist, Hogan Drug Co., 261 Wood St., W. LaFayette, Ind.
 S. F. KELLAR, Pharmacist, Kellar's Pharmacy, Brazil, Ind.
 L. C. MERRITT, Asst. Pharmacist, Merritt Drug Co., 505 N. Main St., Frankfort, Ind.
 J. L. MORGAN, 808 Indiana Ave., Jeffersonville, Ind.
 B. M. NORDYKE, Pharmacist, Nordyke Pharmacy, Wolcott, Ind.
 G. F. NORRIS, Pharmacist, Norris Pharmacy, South Whitley, Ind.
 E. A. O'HARROW, Manager of Varsity Pharmacy, 527 E. 4th St., Bloomington, Ind.
 N. W. POWELL, Pharmacist, White's Pharmacy No. 1, 415 S. 7th St., Clinton, Ind.
 R. B. ROBERTSON, see Bachelor of Science for 1921.
 C. H. ROMMEL, Pharmacist, Carson's Pharmacy, West LaFayette, Ind.
 V. R. SCRITCHFIELD, Pharmacist, Scritchfield's Pharmacy, Lowell, Ind.
 C. E. SHAW, Asst. Manager of Alfred Pharmacy, 2802 St. Antoine St., Detroit, Mich.
 L. B. SMILEY, Pharmacist, Wayne Pharmacal Co., Ft. Wayne, Ind.
 V. N. SMILEY, Pharmacist, 40 S. Huntington St., Wabash, Ind.
 C. M. SPANNUTH, Pharmacist, Bennett's Pharmacy, 230 N. State St., Sullivan, Ind.
 I. P. WEISHAAR, Pharmacist, Hook Drug Co., LaFayette, Ind.
 L. R. WILCOX, Asst. Manager of Meyer's Drug Co., 314 W. Williams St., Ft. Wayne, Ind.
 V. B. WOLFE, Pharmacist, Walkerton, Ind.
 B. B. WOLFE, Student of Chicago College of Osteopathy.

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